

REMARKS

General Comments

Applicants thank the Examiner for entering and considering the Response under 37 C.F.R. § 1.111 filed on March 27, 2007. Claims 1, 3-6, 8-18, 20-23, 26, and 27 have been examined.

Claim Rejections Under 35 U.S.C. § 103(a)

In rejecting the current claims, the Examiner cites a new reference to Miyazaki et al. (U.S. Patent No. 6,930,745; hereinafter “Miyazaki ‘745”). The Examiner now rejects claims 1, 3, 5, 6, 11, 14, 17, 18, 20, and 23 under 35 U.S.C. § 103(a) in view of Miyazaki ‘061, Kane, and Miyazaki ‘745; claims 4, 8, 15, 16, 21, and 22 under 35 U.S.C. § 103(a) in view of Miyazaki ‘061, Kane, Miyazaki ‘745, and Hirakata; claims 9 and 10 under 35 U.S.C. § 103(a) in view of Miyazaki ‘061, Kane, Miyazaki ‘745, and Tani; and claims 12, 13, 26, and 27 under 35 U.S.C. § 103(a) in view of Miyazaki ‘061, Kane, Miyazaki ‘745, and Shimizu. Applicants respectfully traverse these grounds of rejection.

Claims 1, 3, 5, 6, 11, 14, 17, 18, 20, and 23 - Miyazaki ‘061, Kane, and Miyazaki ‘745

Independent claim 1 recites, *inter alia*, a liquid crystal display “wherein said at least one first conductive column is surrounded by said seal, and wherein said seal shrinks when a sealing material is set.” The Examiner acknowledges that Miyazaki ‘061 fails to teach or suggest a conductive column that is surrounded by a seal. However, the Examiner maintains that Fig. 2 of Miyazaki ‘745 discloses a conductive particle 8 that is surrounded by seal 7. The Examiner also asserts that it would have been obvious to a person of ordinary skill in the art to modify Miyazaki ‘061 to include the conductive particles 8 surrounded by seal 7 of Miyazaki ‘745 to prevent air bubbles in the sealing section or occurrence of sealing defects.

First, Applicants note that the electrical connection member of Miyazaki '745 has a completely different configuration from the claimed conductive column. As shown in Fig. 2 of Miyazaki '745, the conductive particles 8 are formed as spheres that are dispersed within the non-conductive resin material 7, not as a conductive column (col. 8, lines 19-28). Further, Miyazaki '745 requires the formation of two electrical connection portions. One electrical connection is required between the conductive particles 8 and the first substrate 6a, and another electrical connection is required between the conductive particles 8 and the second substrate 6b (col. 9, lines 29-33). In contrast, the claimed conductive column allows a single direct connection between the first and second substrates. Therefore, the claimed conductive column provides a more reliable electrical connection than the conductive particles 8 of Miyazaki '745.

As discussed above, Miyazaki '061 and Miyazaki '745 fail to teach or suggest a liquid crystal display “wherein said at least one first conductive column is surrounded by said seal, and wherein said seal shrinks when a sealing material is set,” as recited in claim 1. Further, Kane fails to remedy this deficiency in the Miyazaki references. Although Kane discloses shrinking an adhesive to maintain a seal (col. 4, lines 3-13), Kane does not teach or suggest forming the seal to surround a conductive column. Therefore, Applicants submit that claim 1 distinguishes over Miyazaki '061, Miyazaki '745, Kane, and their combination, at least by virtue of the aforementioned differences, as well as its additionally recited features.

Because independent claims 17 and 18 recite features similar to those discussed above with regard to claim 1, Applicants submit that claims 17 and 18 distinguish over Miyazaki '061, Miyazaki '745, and Kane for similar reasons, as well as their additionally recited features. Further, Applicants submit that claims 3, 5, 6, 11, 14, 20, and 23 are patentable at least by virtue of their respective dependencies on claims 1 and 18, as well as their additionally recited features.

Claims 4, 8, 15, 16, 21, and 22 - Miyazaki '061, Kane, Miyazaki '745, and Hirakata

As discussed above, Miyazaki '061, Kane, and Miyazaki '745 fail to teach or suggest a liquid crystal display “wherein said at least one first conductive column is surrounded by said seal, and wherein said seal shrinks when a sealing material is set,” as recited in claims 1 and 18. Applicants submit that Hirakata fails to remedy this deficiency. Therefore, claims 4, 8, 15, 16, 21, and 22 are patentable at least by virtue of their respective dependencies on claims 1 and 18, as well as their additionally recited features.

Claims 9 and 10 - Miyazaki '061, Kane, Miyazaki '745, and Tani

As discussed above, Miyazaki '061, Kane, and Miyazaki '745 fail to teach or suggest a liquid crystal display “wherein said at least one first conductive column is surrounded by said seal, and wherein said seal shrinks when a sealing material is set,” as recited in claim 1. Applicants submit that Tani fails to remedy this deficiency. Therefore, claims 9 and 10 are patentable at least by virtue of their dependency on claim 1, as well as their additionally recited features.

Claims 12, 13, 26, and 27 - Miyazaki '061, Kane, Miyazaki '745, and Shimizu

As discussed above, Miyazaki '061, Kane, and Miyazaki '745 fail to teach or suggest a liquid crystal display “wherein said at least one first conductive column is surrounded by said seal, and wherein said seal shrinks when a sealing material is set,” as recited in claims 1, 17, and 18. Applicants submit that Shimizu fails to remedy this deficiency. Therefore, claims 12, 13, 26, and 27 are patentable at least by virtue of their respective dependencies on claims 1, 17, and 18, as well as their additionally recited features.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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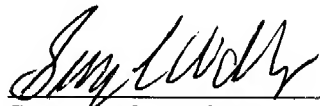
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